9/2/83
C8120-2

- Cable TV Industries and S.A.L. end merger talks
- Support widens for cable information push
- Nielsen pegs cable penetration at 39.3 percent
- New Englanders convene on Cape Cod

CableVision™

The news and features weekly of the cable television industry September 5, 1983 $3.00

Construction: After the Gold Rush

CV1FV20814GAR452 4986/1
SUSAN GARNER
CONGRESSIONAL INFO SERVICE
7315 EAST-WEST HIGHWAY
MD 20814

PLUS Video showrooms: per-inquiry ads

BEST AVAILABLE COPY

CableVision | September 5, 1983. Volume 9, Number 1

Between the lines/5
CableScope/11
Newswire/12
Update/15
Leading the week/18
Construction callbook/23
Programming/39
Marketing/44
Business/48
Construction report/58
CableVision Plus/71
Technology/114
Government & law/118
People/122
Events/128
Classifieds/133
Advertisers' index/137
Cable stats/142
Parting words/146

TITSCH COMMUNICATIONS, INC.: *President,* Robert Titsch; *Executive Vice President,* Paul FitzPatrick; *Vice President, Editorial,* Patrick Gushman; *Chief Financial Officer,* Michael Borer; *General Manager,* Michael McCready; **EDITORIAL OFFICES: New York:** *Editor,* Jay Rubin; *Bureau Chief,* Victor Livingston; *Associate Editors,* Cecilia Capuzzi, Jean Bergantini Grillo, Sally Russell; *Manager, Editorial Services,* Simon Applebaum; *CV Reviews,* Robert DiMatteo; *VICE PRESIDENT,* Jeri Baker; **Denver:** *Managing Editor,* Wayne H. Lasley; *Associate Managing Editor,* Frank Hogan; *Managing Editor,* CableVision Plus, Madeline Hardart; *Assistant Editors,* Gretchen Dietsch, Constance Warren; *Editorial Assistant,* Patricia Major; **Washington, D.C.:** *Associate Editor,* Craig Leddy; *Cable Statistical Editors,* Paula Caffey, Shawn Cantrell; Mira Dabrowski, Maribeth Thelen; **Los Angeles:** *Bureau Chief,* Eric Taub; **PRODUCTION:** *Production Director,* Carol Rush; *Art Director,* Brad Hamilton; *Artists,* Nanette Campbell, Earl V. DeWald, Sheri Michaelson, Lynn Prator Sultan, Carol Thompson, Brent D. Veysey, Shari Wajda; **ADVERTISING: New York:** *Associate Publisher and National Sales Manager,* Catherine Rasenberger; *Account Executive,* Sherwood S. Sumner. **Denver:** *Account Executives,* Cathy Lynn Wilson, Kimberly Korb, Donna Briggs; *Classified Manager,* Suzanne Sparrow; *Classified Ad Sales Manager,* Marcia Larson; *Customer Service,* Laura Kinkead; *Circulation Director,* James Stein; *Assistant Circulation Director,* Mona Veatch; *Traffic Manager,* Kathy Berlin; **OFFICES: Denver** 2500 Curtis Street, Denver, Colorado 80205 -or-P.O. Box 5727-TA, Denver, Colorado 80217, (303) 295-0900 **Washington Bureau** 1701 K Street, N.W., Suite 505, Washington, DC 20006, (202) 835-0900 **New York Bureau** 101 Park Avenue, Fourth Floor, New York, New York 10178, (212) 661-7410 **West Coast Bureau** 101 North Robertson Boulevard, Suite 206, Beverly Hills, California 90211, (213) 659-3965

© Titsch Communications, Inc., 1983. All rights reserved. *CableVision* (USPS 100-430) (ISSN 0361-8374) is published weekly except the week of January 2, 1984, by Titsch Communications, Inc., 2500 Curtis Street, Suite 200, Denver, Colorado 80205 -or- P.O. Box 5727-TA, Denver, CO 80217-5727. September 5, 1983, Volume 9, Number 1. Subscription price: 1 year, $64.00; 2 years, $115.00; 3 years, $154.00. Outside USA: 1 yr.-$124, 2 yrs.-$205, 3 yrs.-$274. PREPAYMENT IN U.S. FUNDS ONLY! Second-class postage paid at Denver, Colorado. POSTMASTER: Please send address changes to *CableVision*, P.O. Box 5727-TA, Denver, Colorado, 80217-5727.

Member of the Business Publications Audit of Circulation BPA

Kathryn Creech

CCI gains support

The Council for Cable Information announced that it is receiving wide industry backing, including that of holdout Ted Turner, chairman of Turner Broadcasting System. **Leading the week, pages 18-22.**

MCTV prosecutes thieves

Manhattan Cable TV goes to federal court against 33 individuals and three bars in New York City it accuses of theft of service. **Leading the week, pages 18-22.**

Merger talks broken off

After failing to reach a definitive agreement, Cable TV Industries and S.A.L. Cable Communications break off merger talks that had begun in July. **Leading the week, pages 18-22.**

Lewis makes changes

Warner Amex Cable gets a new chief financial officer as Chairman Drew Lewis moves to reorganize the fifth-ranked MSO's finance department. **Leading the week, pages 18-22.**

Nielsen July figures

Nielsen puts July's cable penetration nationwide at 39.3 percent, a figure that tops Arbitron's recently released 35 percent figure. **Leading the week, pages 18-22.**

Cape Cod clambake

Members of the New England Cable Television Association converge on old Cape Cod for their annual convention and clambake. **Leading the week, pages 18-22.**

Showtime goes video

Showtime moves into the youth market with its September premiere of *Showtime's Video Rock*. **Leading the week, pages 18-22.**

Serving the handicapped

After less than a year on a video channel of Cablevision of Connecticut, a unique program called *Cable Soundtrack* has generated goodwill for the handicapped and the cable system as well. **Page 39.**

Getting the last laugh

A brainstorming session between Showtime staffers yields in the search for *The Funniest Person in America*. **Page 39.**

Products reflect programs

ESPN and The Nashville Network are finding that merchandising their network logos can reinforce audience bonds and generate some extra revenue. **Page 44.**

High standard statute

Local cable advisory board gives Warner Amex's Dallas system 60 days to improve customer service. **Page 48.**

After the gold rush

Annual construction report focuses on the state of the industry in the post new-build era, with seven company profiles from around the country, a suppliers' survey and an overview from Society of Cable Television Engineers President Tom Polis. **Page 58.**

Teletext debate continues

Broadcast and cable industries are continuing the argument over the question of mandatory teletext carriage. **Page 118.**

About the cover

Construction of Mile Hi's system in Denver continues, with Aeby Communications working as contractor. Photo by Gretchen Dietsch.

This week in PLUS

Peter Lemongello and Boxcar Willie would be green with envy. When the per inquiry ad spot moved from broadcast to cable, it gained better time slots, better products and better-produced ads. So say the direct marketers who make the ads available to most ad-supported services. The ads seem to pay off for everyone involved; advertisers reach a more targeted audience, and the services make up to 40 percent of their annual income from them, says one estimate. . . . To give its system an identity among its subscribers—and among its advertisers, Cox Cable of San Diego tried an unusual approach. It took one of its LO channels and gave it broadcastish call letters—KCOX. And, to help with public relations, customer service and retention, the channel carries programs that help explain what cable is and how Cox of San Diego works. **Pages 71-94.**

After the Gold Rush

There may be more rumblings on cable construction sites these days than just the mashing gnaw of trenchers or the hydraulic hiss of bucket trucks.

As the cable industry enters into what might be dubbed the "post-new-build era," there is anxious talk that a slowdown in construction activity might very well be evolving into something akin to a "shakeout." Such speculation comes not from industry doomsayers, but largely from the construction players themselves, including some of the smaller ones who fear that they may be squeezed out by what one of them in the following special report termed "the big boys."

Companies large and small provide turnkey construction services; the following report profiles seven turnkey players and also focuses on the equipment supplier side of the industry. Among the construction officials interviewed—a small slice of this industry sector and an informal sampling—there was a general theme voiced: a decline in new-build activity is being accompanied by an increase in rebuild and upgrade work, but not enough to offset the new-build drop-off. And this economic fact of life means that the existing universe of construction players will be competing for a shrinking pool of projects. As Jeff Keeler, president of the Columbus-based Fishel Co., put it: "The gold rush is over."

Not surprisingly, the smaller construction players, those which cannot benefit from the economies of scale that accrue to larger firms, stand to lose the most. As competition in construction bidding increases, a price war of sorts has broken out; according to some of those interviewed in the following report, larger firms with deeper pockets are able to underbid smaller competitors. While such a tack may reduce margins even for the larger players who win the bids, some of their smaller competitors believe that the "majors" are purposely squeezing them out. Laments Tony DeNigris, president of Nationwide CATV: "It keeps (the bigger players) in the ball park, but the other guys may get washed down the drain."

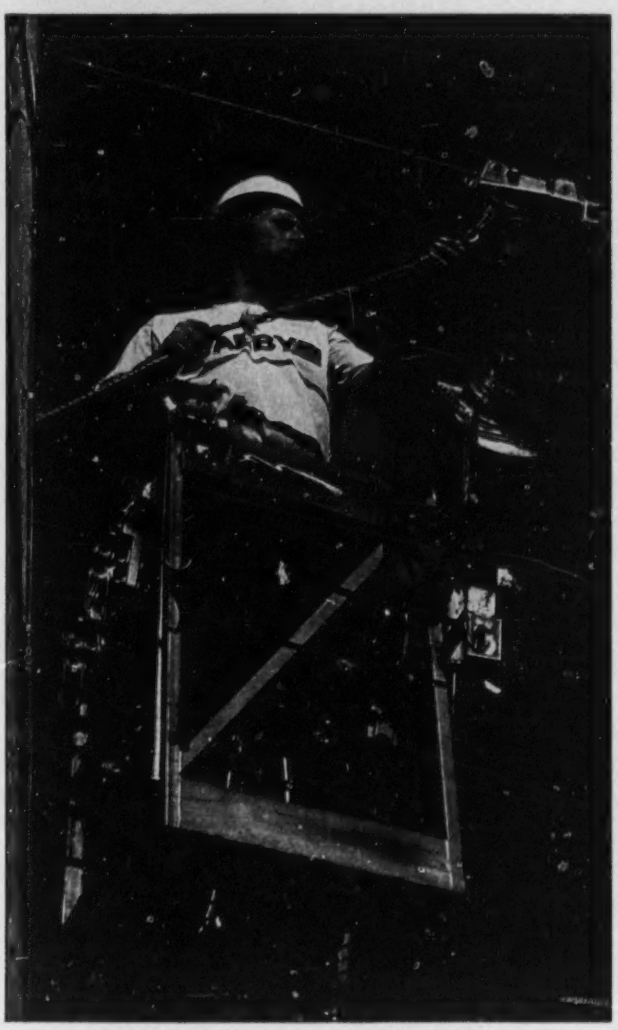
Larger firms, of course, may see it more as the inevitable outcome of an economic natural selection process than purposeful, predatory moves. Mark Clancey, president of Coaxial Communications, openly predicts a "shakeout" among construction competitors—but he says it as a result of more complex construction projects that require greater proficiency and high-tech capabilities. Rebuilds, he says, will be more sophisticated as operating revenues from maturing MSOs begin the flow back into existing systems in future years. "The companies that will take on these 'rehabilitation' projects will be specialty firms that have a proven track record of performing that type of work."

Yet many construction players were formed and capitalized "almost entirely" in the new-build era, Clancey notes. Some of those players, he maintains, may be ill-equipped to fulfill the tasks that lay ahead.

The smaller players take issue with that, maintaining that their size is a virtue; because they are not over-extended, the argument goes, they are better able to provide the kind of quality work that MSOs—and finicky franchise authorities and their constituencies—demand. Increasingly, small and mid-sized construction firms are talking about personalized service and quality work, factors they believe can give them a needed edge in competing with deep-pockets players for project bids.

Granted, there is much new-build construction ongoing. But this work represents contracted projects, and even then is subject to cutback by MSOs which, if franchise agreements allow, may elect to spread capital costs over a greater period of time. Not surprisingly, it is the rebuild miles where competition among construction players is expected to be the most fierce.

On the supplier side, the steep price increases that accompanied the new-build boom of a couple of years back have all but dissipated, buyers state. While there are few signs of price cutbacks, prices appear to have stabilized somewhat, making things a bit easier for purchasing officers at MSOs and construction firms.



But players on the supplier side report that price stability is a reflection of slackening demand, due to the same overall reduction in construction activity that has raised anxiety among some construction players. No longer can suppliers rely on a franchising-construction continuum to sustain their business. The same factors that are leading to increased competition among contractors could heat up the supplier side as well. It very well could be that "slow but steady" is the best suppliers can hope for in the evolving post-new-build era—unless transactional services that require additional hardware again come into vogue. But another factor on the supplier side is that few players remain "cable only"—already, there is a push by some firms to design and market hardware for alternate television technologies such as DBS and SMATV.

One welcome sign for all sides of the industry is a moderation of interest rates. While full economic recovery has yet to happen, a cooling off of interest rates should help industry firms in their efforts to obtain capital—and as they attempt to compete for a diminishing number of contract bids.

Our report opens with profiles of construction contractors who offer turnkey services—a preferred method of accomplishing cable construction for reasons they themselves best state. But the profiles also reflect an industry in flux, an industry that is decreasingly entrepreneurial but has yet to fully mature. Accompanying the profiles is an analysis of the supplier side.

(Continued on page 63.)

(Continued from page 58.)

Fishel: ready for the rebuild

The Fishel Co. of Columbus, Ohio, though only in the cable construction business for four years, has been doing underground utility work for 48 years—enough time, believes Fishel President Jeff Keeler, to warrant his company's slogan, "The World's Greatest and Safest Ditch Diggers."

Getting into cable construction was a "natural" for Fishel, said Keeler. In 1979, Fishel was working a master contract for all underground construction for South Central Bell in the Jefferson County-Louisville, Ky., area. Fishel extended its expertise in underground construction to cable installation in that geographic area. The experience, coupled with increasing interest rates that kept housing starts down and cut into Fishel's telephone, gas, electrical and water hardware installations, launched the company into cable construction.

Now, three years later, cable construction makes up 40 percent of Fishel's business. The company employs a 700-person work force.

After Fishel did the construction for Storer in Louisville, the MSO asked the company to bid on other work in Phoenix

Suppliers shift focus

Most cable system equipment distributors admit that the recent slowdown in plant construction has resulted in a subsequent slack period in their own business over the past several months.

Some distributors are known to be struggling with sales at the present time. Business is by no means at a standstill, but it generally has slacked off, they said.

The slow period for equipment sales appears for the most part to be related to the generally sluggish construction activity of the major MSOs. A drop in franchising activity and a lag in construction capital are generally responsible, observers said. Equipment suppliers can no longer merely follow in the footsteps of the franchise and construction processes in order to pick up business. As one supplier said, "That window's closing."

While business prospects related to construction do not seem that rosy, neither are they particularly bleak. Several major urban areas—such as Baltimore, Cleveland, Detroit, Philadelphia, St. Louis and Washington, D.C.—are still in the midst of the franchising process. Many other systems are going to be rebuilding and upgrading. These situations portend a slow but steady level of line equipment sales over the next few years.

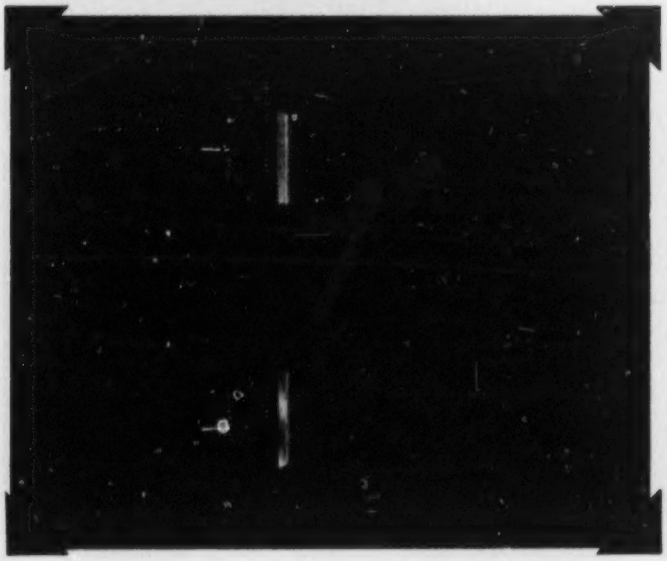
In addition, the future holds new technological advances that distributors can use to entice their customers. Improvements are being made in the areas of expanded amplifier bandwidth and performance, addressable converters, fiber-optic cable and other components that will give MSOs and independent system operators new options from which to choose. The phrase "state-of-the-art," often overused and nearly worn out, is resurfacing with a new pride.

While much of the U.S. manufacturing industry is getting a kick in the shins for building shoddy equipment, cable engineers said the equipment being peddled by today's distributors is generally of higher quality than it was several years ago. The basic nuts and bolts of a cable system have improved in quality while generally staying competititve in price, they said.

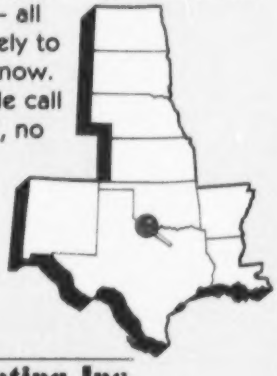
Supply houses appear to be strengthening their own product lines by keeping pace with state of the art technology, or they are repositioning themselves for new business niches they can fill. Some companies are looking to sell hardware to new television technologies—SMATV, DBS, MDS, etc.—as a new area for their own business growth.

At the same time, distributors may have

COMM/SCOPE TEXAS



Whether you're deep in the heart of Texas or high up in the Dakota hills, when you need cable we're almost as good as next door. Often as good as next day. That's because of Comm/Scope's Dallas Distribution Center, one of several Comm/Scope centers based at strategic service locations throughout the United States. Just like Dallas, each center carries a full inventory of trunk and distribution cable and dropwire — all the types you are most likely to need. For fast service call now. You'll soon see why people call it "Comm/Scope Country", no matter what part of the country they're in!



M/A-COM

Comm/Scope Marketing, Inc.

P.O. Box 1729 • Hickory, NC 28603
800/438-3331 • 704/324-2200 • Telex: 802-166

and Dallas. Since then, Fishel has opened offices in those cities, recently completing its building of 500 miles of trenched underground plant in its race with American Cablevision (Times Mirror) to wire as much of Phoenix and Glendale as possible. (*CV Plus*, 1/17/83, p. 4).

The Phoenix experience was Fishel's cable baptism by fire. For the past 18 months, the company found itself in the middle of an overbuild war spurred by Phoenix City Council's desire for competition.

The Phoenix contract was Fishel's biggest build; the company installed cable in densities of 110 to 190 homes per mile. Fishel experienced, in one concentrated dose, many of the problems that usually befall cable construction companies.

Employee moral and motivation was a concern. Construction teams were forced to work odd weekend and evening hours so that construction could be done during off-peak traffic periods. Crews often put in 12-hour days, six days a week, sometimes in temperatures of 110 degrees, all the while racing to claim as much Phoenix territory as possible for Storer.

When the crew first got out there, construction had to be shut down because the system owner had not obtained a permit for right of way.

The dry, dense Phoenix terrain posed special problems. Vermeer 434 offset trenchers with rock chains were necessary to cut into the hard soil. All told, Fishel invested $2 million in equipment for the Phoenix build. "We survived it," Kessler said.

Having completed its Phoenix involvement, Fishel is in the process of redeploying its assets—equipment and key people—to other cable builds. Fishel is now working on Storer systems in Dallas, Houston, Portland and central New Jersey.

Fishel's progress in the cable construction business has been steady and positive, according to Keeler, even though he feels that the company got into the business just as it is reaching a low point.

"My outlook was optimistic because of all the opportunities all over the country, but those opportunities for a contractor are diminishing since most of the major builds have been or are being built. The gold rush is over," Keeler said.

Most MSOs prefer to buy their own equipment and perform their own engineering since they have the manpower and it is cost-effective in the long-run. True turnkey construction is a minimum part of Fishel's business, and of the cable construction business as a whole. Keeler estimates that 4 percent of Fishel's business is turnkey, accounting for less than 10 percent of the company's revenue.

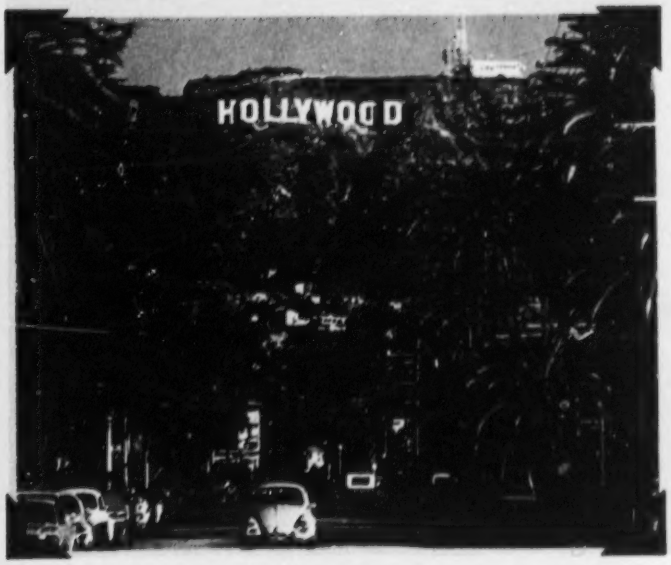
"We call ourselves a turnkey contractor, we have those capabilities. We don't find that the marketplace, at this point in time, is utilizing all those services."

The future for companies such as Fishel is in the rebuild market, Keeler believes, though he believes even that will be a some new competition cropping up in the next several years. Telephone companies are eyeing the system construction market. Bell operating companies, which will soon be spun off from the parent AT&T, already have expressed a desire to help construct systems in Detroit, Philadelphia and Washington. It is unclear what types of related equipment telcos may wish to provide, but certainly they have the ability and know-how to move into this area if they wish. Similarly, the parent AT&T, with Bell Labs in tow, and its separate subsidiary, AT&T Information Systems (currently known as American Bell), could develop cable hardware. On the other hand, some cable suppliers may find themselves latching onto the telcos as new business partners.

Another potential competitor comes from abroad. Japanese businesses, sources said, are more interested than ever before in providing equipment for cable and hardware for other television technologies, particularly DBS.

The past several months have seen several major acquisitions and mergers in the hardware side of cable. Cable TV Industries announced that it would buy out S.A.L. Cable Communications, but the deal recently fell through. Texscan purchased GTE Sylvania and Computer Video Inc. Jerrold acquired Century III Electronics. Times Fiber teamed up with TOCOM Inc. C-COR acquired CableBus Labs.

COMM/SCOPE CALIFORNIA



From sunny California to Colorado's boomtowns, there's cable "in them thar hills" because Comm/Scope is there to deliver. All over the Golden West you'll find the Comm/Scope fleet of trucks on the road—and on the way—to any point shown on this map. Each of our trucks can bring you the cable you want when you want it. And with a constantly replenished inventory housed in this Huntington Beach, California distribution base, there's no long wait involved. Call on us next time. You'll agree . . . when it comes to reliability as well as product . . . Comm/Scope is good as gold.

M/ACOM

Comm/Scope Marketing, Inc.

P.O. Box 1729 • Hickory, NC 28603
800/438-3331 • 704/324-2200 • Telex 802-166

limited field. "That's what will sustain the construction marketplace of the future, but there will not be many opportunities for contractors in the future," he said.

New-build construction is easier with fewer risks for the construction company, he said.

There is no worry about existing plant obstacles or disrupting existing customer service. Because of the difficulty in working a rebuild, construction is more expensive. But because of the highly competitive market, and the entrance of new and inexperienced companies to the cable construction scene, only a certain number of construction companies will make it in the rebuild market.

"The cream will rise to the top," Keeler said. "Good quality contractors will have a place to work in the rebuild market."

Commco: Expanding its reach

Preparing to celebrate its 15th anniversary next month, Commco Construction of El Campo, Texas, didn't think about doing turnkey projects until last year. After initial consideration, Commco backed off until economic conditions settled down. Later in the year, the company accepted the concept.

With 18 construction projects currently in progress, ranging from Warner Amex's 400,000-home Dallas franchise to United Cable's 120-channel fiberoptic system in Alameda, Calif., five jobs are turnkey—four rebuilds and Alameda.

"In 1982, people in the industry encouraged construction firms to build on a turnkey basis," recalled Bill Jenkins, Commco's president. "We originally shied away from it, because of the cost escalation on materials everyone went through in the last couple of years. Lately, we've seen some softening in the price of strand, cable and other industry hardware by 10 to 15 percent. Prices are stable so we're more comfortable about using turnkey. They tend to be small system jobs; 12-channel plant operators want upgraded to 35 channels that only involve a small amount of plant miles. We haven't seen any 1,000-mile turnkey jobs yet, but I think there's going to be some. So far, the smaller independent operators want turnkey, but look for the major MSOs to be big turnkey customers within the next 18 months."

When Jenkins acquired Commco five years ago, the company was known as a regional contractor, confining its activity to Texas systems with occasional work outside the state. The year prior to the acquisition, Commco made $600,000 in revenue. Since then, its construction pace, as well as its financial status, has risen considerably. For fiscal 1983, ending last May, Commco turned in $21 million in revenues. With 800 employees, 196 trucks and 48 trench machines and trailers in

Are these recent buyouts and mergers a sign of things to come? That question brings mixed responses from the suppliers' standpoint. Some foresee a trend toward consolidation, while others feel that partnerships will develop on a selective basis, where one company's product line can provide related components to another company's current offerings. Obviously, there will be a lot of talk within the supplier business about the breakdown in the Cable TV Industries-S.A.L. deal, and it may be some time before the impact of that development is fully felt in the industry.

"Technology is what is moving," said Jay Staiger, product manager for Magnavox CATV Systems.

Staiger's statement refers to the feeling among cable operators that they still want the state of the art. And the newest in technology is what most hardware distributors are pushing.

"In other words, if you've got the state of the art, that's what the customer wants. Everybody's interested in performance out of amplifiers. For distribution products, people want to be able to do more than they previously were able to," Staiger said.

Improvements in amplifiers have always been of interest to cable operators. The 300 MHz amplifier of yesterday and the 440 MHz amplifier of today are giving way to the 500 MHz amplifier of tomorrow. Last May, Falcon Communications was awarded a franchise in Pasadena, Calif., to

COMM/SCOPE
NORTH CAROLINA

We know you want your cable on site and on time. If you're buying from Comm/Scope, there's never a question about delivery because of our network of distribution/warehousing centers, like the one based alongside our manufacturing complex in Catawba, North Carolina, and serving the region shown here. In this ever changing business, you have enough problems to deal with. Call Comm/Scope and delivery time will never be one of them.

M/A-COM

Comm/Scope Marketing, Inc.
P.O. Box 1729 • Hickory, NC 28603
800/438-3331 • 704/324-2200 • Telex 802-166

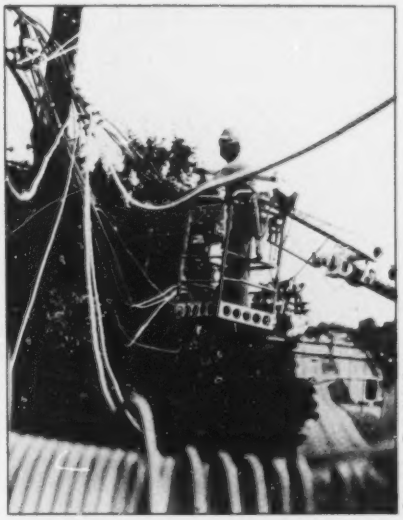
service. Jenkins predicted a boost in revenues for fiscal 1984 to $25-$27 million.

Along with the Alameda construction, the company is working on Times Mirror's 35-channel new-build in Providence, R.I. That system, as well as the Dallas franchise of Warner Amex, is targeted for completion by the end of next year. Active projects also include franchises in Arkansas and Louisiana. But the geographic outreach set by Jenkins brought with it a dramatic turn toward rebuilds.

Commco had no rebuilds underway when Jenkins came on board; of the 18 current projects, 60 percent involve rebuilds. Fourteen projects started this year; 10 are rebuilds.

"Until 1981, we didn't do any," Jenkins said. "This business has turned around in the last two years." Some of those jobs are among Commco's biggest at the moment: three Texas systems owned by Heritage Communications, ranging from 21,000 homes passed in Harligan to 50,000 homes passed in McAllen, all being upgraded from 12 to 35 channels. Completion is scheduled for 1985. Some rebuild construction also is going on at ATC's Austin, Texas, system, gradually moving from 12 to 54 channels over the next few years. Among the top 20 individual systems in the country according to subscriber penetration, that franchise currently covers about 98,000 wired households.

Jenkins sees a stable pattern in equipment costs this year. Trucks and trencher prices are rising this year over last, but



Commco Construction

cable has dipped, he said. Overall, the company plans to spend $750,000 on equipment this year.

During the last few years, Commco has concentrated its work on multi-year projects, where crews spend two to five years building one system. The firm also subcontracts 25 percent of its work to local groups, involving on-site training programs.

"You develop stability in your employees," he said. "In small projects you move people into a town for 60 to 120 days, and a lot of

build the nation's first 500 MHz cable system. After 500 MHz becomes the standard fare, engineers say there's no telling how much amplifier bandwidth may be expanded.

New technologies are being developed to enhance amplifiers. For example, Century III and others are boasting feed forward techniques, while Magnavox touts power doubling devices.

The worthiness of 500 MHz or even 440 MHz system is still a subject of debate among engineers. As a discussion among engineers in the May 9 edition of *CableVision* indicated, the advances in amplifiers do not necessarily guarantee improved quality of service. Yet, amplifiers seem to remain a strong selling point for suppliers because they are also a strong selling point to the franchising authorities from which the cable operators are trying to win a franchise. Such is the nature of the cable franchising process.

"In order to get the franchise, the operators are bidding some outrageous performance (standards)," Staiger noted. "What it's costing the operator is that he's got to put in more expensive equipment."

A number of other developments in basic line technology have taken place that distributors will be peddling as operators seek to upgrade their systems. Most observers agree that the most basic nuts and bolts of a cable system have improved.

Wendell Bailey, vice president of the

COMM/SCOPE INDIANA

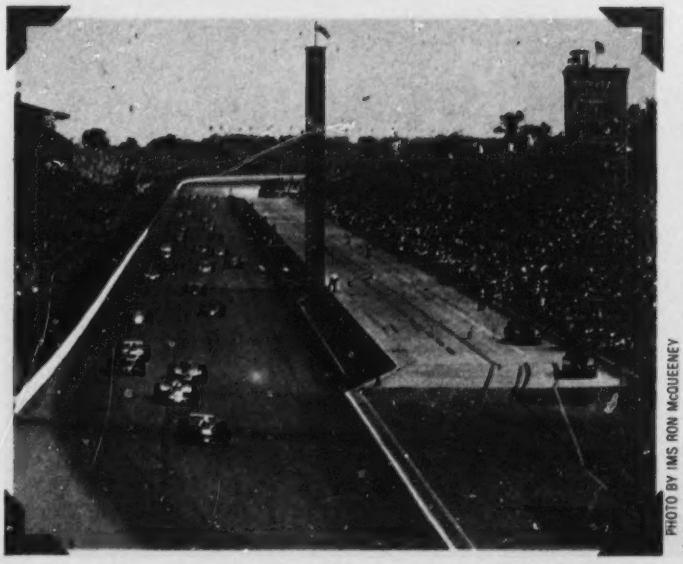


PHOTO BY IMS RON McQUEENEY

You could be laying cable far above Cayahuga's waters... or right in the middle of a windy city suburb... and you'll always be assured of fast delivery of your cable. If you're buying from Comm/Scope, that is. Our distribution center stocks everything you need in cable, ready when you need it. The warehousing base for this region is in Indianapolis, only hours from any point on this map. Call us and you'll get our famous quality and your needed quantity on time, every time. Comm/Scope. We don't overpromise, we perform.

M/A-COM

Comm/Scope Marketing, Inc.

P.O. Box 1729 • Hickory, NC 28603

800/438-3331 • 704/324-2200 • Telex: 802-166

personnel turnover is created. If you have them in a town for three to five years, you develop loyalty with workers (and the community), and you can train them (for other cable positions once construction is completed). Subcontracting is an excellent idea, in that it's easier to motivate your employees. When you're dealing with underground construction, a local or regional contractor has more understanding of the terrain that we would."

The problems encountered by Commco on construction jobs: make-ready and the angry homeowner.

"Make-ready is always the biggest problem, and a terrible one to get around," he said. "You're asking the phone company to do work they may or may not care about, depending on their attitude. It's old and still there in the industry."

As for the homeowner complaints, Jenkins thinks more of them are directed to contractors because of increased media attention to cable in the last few years. "It's on the front page so much in many cities that people recognize us," he said. "There's been growing animosity from people who don't like what we're doing. In order to do my work, I have to go through back lots and front lawns to people's homes. We want the operator to interact with the homeowner, not us."

Jenkins acknowledged that for his company and others, reaction from local residents is becoming a public relations problem—one to which the contractor must respond on its own. In Commco's case, trucks in some communities where consumer outcry has been strong have been labeled to signify a relationship with the cable operator. Brochures are sent in advance of construction work to households, explaining when and what construction will take place.

About 53 percent of Commco's employees are from minorities, an employment stastistic Jenkins is proud of. The company has had few problems with franchise boards over meeting minority guidelines, and actively

(Continued on page 95.)

Office of Science and Technology at the National Cable Television Association, said, "One thing I noticed in looking around at the national show was that the quality of the day-to-day products have improved noticeably. They're better products at roughly the same cost."

A number of hardware suppliers unveiled the latest in engineering feats at the NCTA convention last June. Among the advances were new ways to connect and protect coaxial cable, to configure systems, to tie billing to addressability, to monitor and maintain system performance and to achieve virtually every other facet of hardware-related operations in ways that expand potential and lower costs.

Among the developments in basic line technology is a new type of cable connector manufactured by Raychem Corp. and supplied exclusively by Anixter Communications. The connector, called ThermoCrimp, employs heat application on a high-recovery-force, heat-shrinkable compression ring against a corrosion-resistant aluminum connector body. When heat is applied to the device, a special temperature-indicating paint on the installation has been properly completed.

In another innovation in line technology, M/A-COM Comm/Scope announced a two-level surface treatment method designed to protect copper conductors from corrosion and degradation. Known as Double-Clad, the Comm/Scope innovation is designed as an alternative to use stronger conductor dielectric adhesives, which have been the major means of protecting coaxial cable from moisture migration and corrosion.

Addressability is, of course, one of the hottest topics and one of the most heavily debated issues on the hardware side of cable. The race is still on among manufacturers for the most reliable and innovative system. Now the out-of-home addressability sweepstakes is growing. The major MSOs have widely varying views on the level of addressable activity they wish to get into (*CV*, 2/14/83, p. 36). And manufacturers are racing to offer products that each hopes will convince MSOs that they provide the best.

For the most part, the addressable field is still dominated by some well-known big names: Jerrold, Oak, Zenith, Pioneer and Scientific-Atlanta. Some supply houses are known to be making moves to get more involved in the addressable field. Anixter Communications, for example, is said to be testing the Hamlin Converter and preparing for bulk production.

All of these advanced hardware offerings give supply houses plenty of new wares to sell. But because there is a slower rate of builds these days, many distributors have had to reshape their marketing plans to find the particular niche they can fill.

North Supply Co., based in Lenexa, Kan., is an example of one supply company seeking its niche. A longtime distributor in the telephone business, North will use its experience in cable and telephone for business growth, according to Bill Winslow, product manager for cable TV products.

"Our main thrust, as far as cable is concerned, is to supply cable TV equipment to telephone companies that are building cable franchises," Winslow said.

The company is also developing a line of economical equipment that it can market to small system operators. "The cable distributor today has to be able to develop a product line that is going to be viable now and in the future," Winslow said.

Suppliers said their current product lines could be adapted to suit new television technologies with relative ease. However, there seems to be a feeling of uncertainty at this point as to how much suppliers want to become involved in the new media and how much they would benefit by doing so. While some are taking a hard look at DBS and SMATV, others seem to be taking a wait-and-see attitude.

—Craig Leddy

COMPACT! PRODUCTIVE!
IF PHONE-CABLE TV UNDERGROUND HOUSE DROPS IS YOUR BUSINESS YOU CANNOT AFFORD NOT TO INVESTIGATE!
ASK FOR A DEMONSTRATION
PHONE (716) 675-7373

PROVEN OVER 10 YRS.
157 SENECA CREEK RD., BUFFALO, N.Y. 14224
L-1
LINE WARD CORP.
ONLY
• 800 LBS.
• 24½" WIDTH
• NO TRAILER
• EXCLUSIVE TRACK SYSTEM
CABLE LINE LAYER
NO LAWN DAMAGE
FAST!

(Continued from page 70.)

seeks out minority trainees and subcontractors.

In the midst of Commco's growth as a construction company, Jenkins is bringing his venture out of another business, cable system ownership. Before he came aboard, Commco invested as sole or co-partner in small franchises around Corpus Christi, and in the Southeast. As the company picked up major contracting jobs, such as the Dallas franchise, Jenkins began selling systems. Commco's sole cable system is a 12-channel new-build in Needille, Texas, with 500 subscribers. That, too, will be sold once Commco completes the build, Jenkins said.

"The company got into ownership on a limited partnership basis to offset some tax problems, figuring that owning small systems was a pretty good tax hedge," Jenkins said. "We reaped the tax benefits and sold the systems for capital gains. It was such a small portion of our business, but we sensed a bit of irritation. We're not going to take the chance that one of our customers would object to (our owning systems). I don't think it's conflict of interest, but it might be perceived by some customers that way."

Alameda portends a major boon in system construction using optical communications, Jenkins believes. Backing that conviction up, a number of training programs are going on at other Commco building sites away from Alameda, concentrating on optical technology and techniques. Underground work on the system started in mid-July, while aerial hookups began late last month. Jenkins said construction will be wrapped up by mid-December, with the system wiring subscribers early next year.

"We've spent an awful lot of money developing construction of the system and training people," he continued. "I hope it turns out to be a business."

Qurashi's company on target

Maqbool Qurashi, president of AM Cable TV Industries, started with Jerrold 22 years ago developing products in that company's laboratories. After stints at GE and Magnavox, Qurashi returned to Jerrold to work in its turnkey division.

"There were problems concerning the two-way systems that were starting to come into vogue back in 1973," he explained. "So I trained a number of people for Jerrold and set up a school for installation and field engineering personnel. After that business started to take a downturn and Jerrold decided to get out of the construction business, I felt there was a vacuum, so we started AM Communications in 1974."

The company started out small, but it began in a highly technical phase of the business, according to Qurashi. "We have a contract with Jerrold to renovate the Akron, Ohio, system run by Warner Amex. We redid the whole system, upgrading it and changing some electronics in 1974.

"The people I had in management had close to 200 years of experience in turnkey construction among them. So it was natural for us to get into turnkey construction," Qurashi explained. "In the late '70s and early '80s, the labor content was very high, so it made sense for a contractor to be in the turnkey business."

Half of AM Cable's business today is turnkey jobs. And that side of the business is starting to grow, according to Qurashi. "I think the system owners are realizing it pays to go turnkey with a reputable and well organized company," he noted.

AM Cable counts U/A Columbia and TeleCable among its list of turnkey clients, along with smaller cable system operators. The company now has 20 projects underway in 18 states.

For its biggest ongoing project, AM Cable is serving as the prime aerial contractor for Cablevision Systems' Boston build. The aerial portion will run some 490 miles of the 750-mile system. In addition, the company is pulling cable through the ductwork, installing the equipment for the underground portion of the system and doing all the engineering.

Qurashi believes the recession didn't affect the cable TV industry. "Whatever franchises were delivered and signed before the interest rates rose, the system operators had the obligation to fulfill. They really couldn't get away from it," he said.

"Construction slowed down over the past six months, but the reason is the struggles in the big cities like New York, Philadelphia, Baltimore, Detroit, St. Louis and Minneapolis," he said. "I think those have delayed construction." Over the past month, however, Qurashi said that requests to bid have increased tremendously.

AM Cable has close to 650 employees in its construction division, and nearly 400 pieces of "rolling stock" equipment for both its underground and aerial operations. Last year, the company finished with revenues of $33 million and gross profits of $8.7 million.

Nearly 70 percent of its construction projects are for new-builds, with the remainder rebuilds. Qurashi predicts that the proportion of new-builds will increase as the areas such as Philadelphia and the outer boroughs of New York City come on line.

AM Cable doesn't have much problem with the quality of equipment that has been in the marketplace for some time. But new equipment is a different story, according to Qurashi: "Sometimes a vendor has a technology, and he gets forced into delivering that technology to meet certain requirements and to capture the market. In those areas, we've had some problems." He listed amplifiers with advanced features as an example.

Qurashi thinks the Boston build has given his company experience that could be helpful in other urban areas. For example, in order to comply with requirements dealing with minority and resident

Plant and potential plant miles by state

State	Plant Miles	Potential additional plant miles
Alabama	12,109	6,886
Alaska	699	527
Arizona	7,329	5,773
Arkansas	7,534	4,396
California	48,908	37,170
Colorado	7,390	6,559
Connecticut	8,495	10,849
Delaware	2,278	2,225
Florida	36,385	23,227
Georgia	17,746	18,457
Hawaii	2,077	1,680
Idaho	3,355	2,453
Illinois	18,029	16,808
Indiana	12,893	9,707
Iowa	7,461	6,740
Kansas	7,128	5,206
Kentucky	10,620	7,020
Louisiana	9,624	7,874
Maine	2,622	1,806
Maryland	6,155	5,845
Massachusetts	9,421	7,694
Michigan	20,039	14,601
Minnesota	6,879	4,361
Mississippi	7,105	5,031
Missouri	9,734	6,988
Montana	1,890	922
Nebraska	3,352	3,555
Nevada	1,384	1,471
New Hampshire	3,160	1,974
New Jersey	21,107	16,757
New Mexico	4,726	3,627
New York	30,221	22,396
North Carolina	20,059	16,999
North Dakota	1,514	934
No. Marianna Islands	72	85
Ohio	25,720	18,715
Oklahoma	11,021	8,053
Oregon	7,552	5,443
Pennsylvania	34,590	19,380
Puerto Rico	1,068	350
Rhode Island	863	1,793
South Carolina	8,842	5,755
South Dakota	1,362	1,119
Tennessee	14,764	14,182
Texas	44,599	31,943
Utah	1,932	1,167
Vermont	1,543	567
Virgin Islands	200	215
Virginia	12,083	10,415
Washington	10,535	11,314
West Virginia	6,352	3,400
Wisconsin	9,736	8,964
Wyoming	1,859	1,460
Total	**564,121**	**432,838**

Source: ICR, Cable Information Service—a Titsch Communications division.

CUSTOM CABLE OF COLORADO INC.

CATV DESIGN AND CONSTRUCTION

Distributor For:

Blonder-Tongue • General Cable • Miralite
Scientific Atlanta • Soundolier • Standard Communications

National Cable Contractor

Strand Mapping System Design
Underground Construction Overhead Construction
Complete Turnkey

CUSTOM CABLE OF COLORADO INC.
1270 WEST CEDAR AVENUE DENVER, COLORADO 80223 (303) 778-6300

NARRAGANSETT
CAPITAL CORPORATION
Providence, Rhode Island

and

RIFKIN AND ASSOCIATES
Denver, Colorado
have acquired the
cable television systems serving
Kingdom City, Auxvasse and Fulton, Missouri

Narragansett Capital Corporation, a publicly-owned venture capital company specializing in management leveraged buyouts ranging from $5 million to $100 million.
40 Westminster Street, Providence, RI 02903. (401) 751-1000.

participation, AM Cable set up a training school in conjunction with the Boston Technical Institute. "We've used 30 of their graduates," Qurashi said.

"The requirements are there and I fully understand why they are there in a big city like Boston," he said. "The problems become very easy when your customer—like Cablevision Systems in Boston—is very cooperative in resolving them. They've actually sat down with us and created a joint attack on a problem."

"This is a training process for the cities," he said. "It's a different set of rules which we must learn to get used to."

In Boston, there is a requirement that 27 percent of employees are members of minorities, 7 percent are women and at least 50 percent are residents of Boston.

"How can we suddenly put them on the payroll and start building a system for which the city has developed a very ambitious schedule?" he asked. "But the city was very understanding. We talked to them and they said, 'Okay, bring in outside people in the beginning but slowly change over.' And we've done that. We're meeting all the city requirements and we're building at a very high speed in Boston."

Flexibility in the company's management and cooperation from a customer is very important, according to Qurashi. "There are many costs involved here. If the customer isn't sympathetic, he could drive (the contractor) broke. Cablevision has been tremendously cooperative with us. Where they saw that extra costs were being incurred, they shared them."

Qurashi related one story about the Boston build: "The excavating contractor had never done cable TV work before. When he put in the conduits, he put in right angles. You can't pull cable through right angles, so we had to go back and redo the whole thing," he said.

"Each of the cities is going to present its own problems," he warned. "We have learned a lot in Boston, but the outer boroughs may have their own problems, and Philadelphia will have its own problems."

Nationwide stresses quality

Since he began his medium-sized cable construction firm three years ago, Tony DeNigris, president of Nationwide CATV of Milford, Conn., has traded on the fates and fortunes of a maturing industry. When he left the former Alda Gorup, where he was chief engineer, DeNigris had planned to offer a complete package of services, from design and strand mapping and engineering to materials acquisition and hands-on construction. Some of his firm's jobs have been of the soup-to-nuts variety: of the 60 projects Nationwide has worked on, DeNigris reckons that his staff has done more than just build.

But as the economies of the business have changed, so too has the definition of what constitutes a "turnkey" job. These

days, DeNigris says, some of his clients do the heavy preconstruction planning and materials acquisition themselves. But they prefer to turn the bulk of the actual work over to turnkeys, he theorizes, so that the contractor, and not the MSO, is faced with the challenge of making sure that the project is kept within budget. In most cases he's been involved, DeNigris says, the turnkey firm is responsible for absorbing any overruns. And that, he maintains, is both a selling point and a potential pitfall of the business: firms able to bring a job in as planned will profit, while those that cannot control on-site expenses, such as labor costs, risk a margin squeeze. On jobs where his firm is responsible for materials purchases, it assumes responsibility to make sure that what was ordered is enough to get the job done—without excess wastage or a shortfall that could delay the construction timetable.

"If I'm going to sell you something, in order to stay alive I have to deliver exactly what I promise you, but no more," DeNigris says. He recalls seeing hundreds of feet of cable consigned to the dumpster or buried on site, all because a too-large roll of cable was issued by a warehouse crew. "I've seen this happen time and time again," 35-year-old DeNigris recalls. "A system has 100 miles of cable to run, and they build 100 miles of cable, and find out they actually bought 120 miles of stuff on reels. They don't know where the other 20 miles went."

But with a properly drawn turnkey agreement, DeNigris maintains, cost-control responsibilities are shifted onto the contractor. "And the contractors tend not to waste material when they're paying for it themselves."

Controlling costs is a priority item with Nationwide, especially in the current economic environment. As the industry enters the post new-build era—a time when most jobs involve upgrades and rebuilds, the potential universe of clients for turnkeys has diminished proportionately, he says. "More and more contractors at this point in time are competing for the fewer jobs out there," DeNigris says. In order to stay competitive, DeNigris says his firm has found it necessary to lower its overall pricing structure by about 20 percent. That, of course, has meant a squeeze on profits for his firm. (He usually works with about 45 employees; the number varies according to current projects.)

DeNigris says he's had to cut his prices because even larger companies are doing the same thing. Because larger firms can benefit from economies of scale that smaller players cannot achieve, sometimes the "big boys" can underbid smaller competitors, DeNigris maintains. In such cases, he says, he must convince general contractor MSOs that his smaller operation can deliver a higher-quality job. He claims the quality issue led Natiowide to win the turnkey contract for American Cablesystem's South Shore Boston-area builds.

DeNigris says that to stay alive, smaller firms such as his must bid "pretty close to what the big boys are doing... We feel they've been bidding jobs at just about the

When it comes to cable plant construction, it's the things you can't see that make the difference.

Any construction company with minimum competency can meet most esthetic requirements. The real proof of those appearances comes in how that plant performs.

You can't see if the expansion loops are properly made, but you'll know it when the outer sheath breaks and your customers don't have service. You can't see if the splicing is properly done, but you'll know it when there's a temperature variation and you have a series of opens, shorts or intermittent problems.

You can't see if the underground crew removed all the rocks before they backfilled the trench, but you'll know it when the drops don't deliver signal. You can't see where your cable is buried if the sod restoration is meticulous, but your customers will appreciate it.

The construction division of CSS has the professional expertise and the experience to meet the most rigid requirements in urban, rural, aerial or underground plant; whether it's a 5-mile extension, or a major build.

Our competitive pricing and our understanding of management needs so you'll have the rate of construction you need to meet your bottom line goals, will be a difference you can see.

CATV Subscriber Services, Inc.

Construction Division — Jerry Haisman, G.M.
108 State Street / Suite 102
Greensboro, NC 27408
919-273-5553 (in NC) 800-334-0860

Visit us in Atlanta for the SCTA Eastern Show at booth 2000 - 2002.

FOLLOW THE MARKET?
THEN FOLLOW THE LEADER!

DOW JONES CABLE NEWS

- Stock Market Reports
- News from The Wall Street Journal
- Stories and statistics from Barron's
- Precious metals—daily gold coin quotes
- Consumer interest rates
- Money Market Reports
- Exclusive Interviews with CEO's

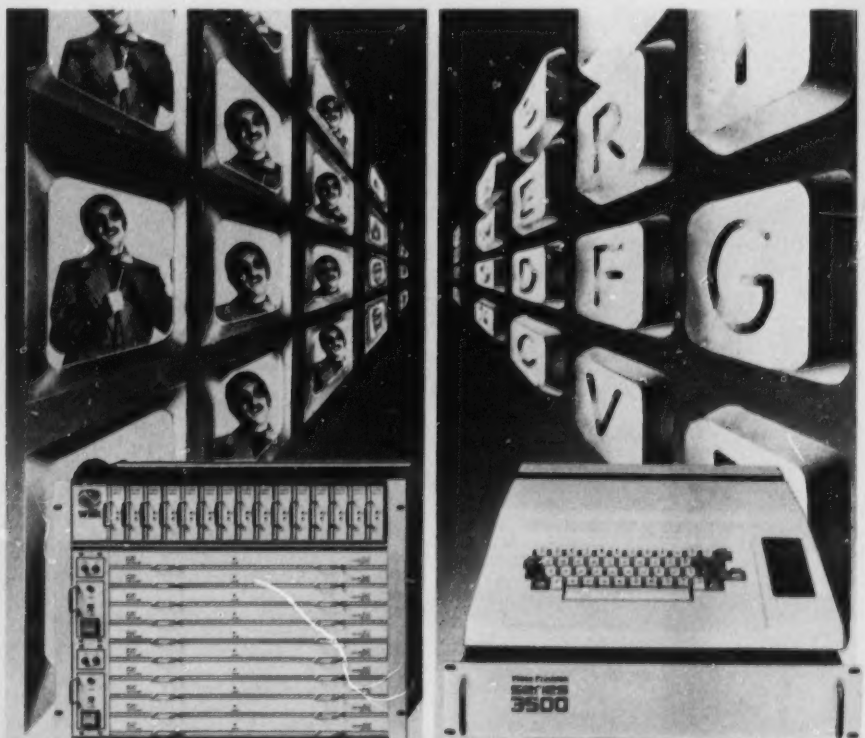
Call Dick Stickney at 1-800-257-5114
or 609-452-2000, ext. 2680

AMCOM, INC.

Building E Suite 200
5775 Peachtree-Dunwoody Road, N.E.
Atlanta, Georgia 30342

CHARLES L. GREENE
President
(404) 256-0228

Cable TV Brokerage



Whether you switch... or generate.
Wilk offers superb performance at low cost.

Wilk's complete line of audio/video distribution and routing equipment offers superb performance at competitive prices. Design technology features state-of-the-art solid state electronics and virtually "transparent" operation where distribution or switching of audio and video signals is required. The 350 Series is based on a standard EIA rack frame with power supply, utilizing any Wilk audio/video distribution module or accessory. The "transparent" routing switchers comprise a series of basic switchers with separate video and audio matrices, which can be utilized to fit most switching requirements.

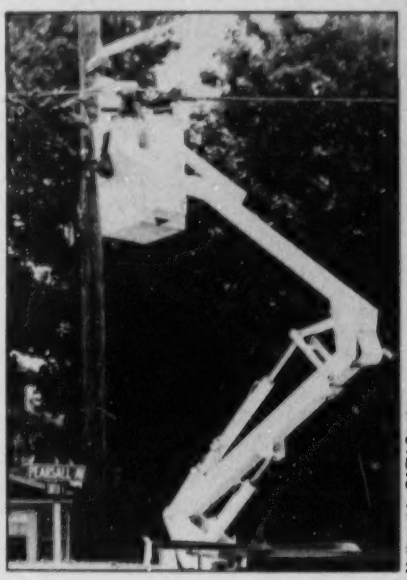
Wilk's line of Video Precision character generators and production titlers are available as either a desk top unit, or with separate keyboard and chassis. The 3300 Series is available with dual fonts, character tilt, eight-color background, two-speed crawl, 62 page memory, and audio cassette and RS-232 interfaces, as well as many more features available in more complex and higher-priced units. In the 3500 Series, each chassis can be accessed by a multiple number of remote keyboards and is available as either a single or dual channel unit, and features eight-color background, time and temperature, programmable fixed title or two-speed elastic length crawl, and 184 pages of memory.

For demanding character generation and switching applications, Wilk offers the best value for all your equipment needs. For more information call toll-free: (800) 828-7641.

wilk

U.S. Corporate Offices: 16255 Ventura Blvd., Suite 1001, Encino, CA 91436 • (213) 788-2338 • Toll free: 800-828-7641
Eastern Regional Offices: 12 Terhune St., Oakland, NJ 07436 • (201) 337-8156 • Toll free: 800-828-7641

Construction



Nationwide CATV Services

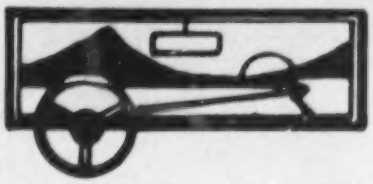
break-even point, in an effort to just keep their people working, just keep the cash flow going. But that makes it harder for some of the smaller guys to get in and stay alive. It keeps (the bigger players) in the ball park, but the other guys may get washed down the drain. It's better for them to keep a job and maybe make very little money on it just to keep people working and keep the equipment in use."

That is why quality should be a paramount concern to turnkeys and smaller construction firms, Nationwide's chief maintains. "We're small enough that we can give them the attention they need. We won't leave them hanging in the wings with one of our junior people or field people that come out of nowhere, as some of the big guys do. (Our clients) are used to dealing with us on a more personal basis, so they've agreed to pay us a little higher to let us do the job. But they're going to get the quality they want."

Quality stems to a large part from in-field supervision, DeNigris says. He maintains that the quality of work performed by most experienced linemen is fairly uniform, because many work from job to job with many companies, refining their expertise and garnering more experience along the way. The key to ensuring on-site quality work, DeNigris believes, is at the field supervisor level: "That's where we put our emphasis. We impress on our foremen and site supervisors that it's up to them to put in place the standards we require. That's where the difference is."

Although DeNigris says he's found it necessary to cut his prices to stay competitive, he claims he hasn't detected significant downward price movements from suppliers. That's better than a couple of yeas ago, he says, "when all we were hearing was 'increase.' Now it's pretty stable. But prices haven't come down." Yet labor costs are continually on the rise, he says. Although most smaller construction firms find it relatively easy to stay non-union because they hire many transient workers and rarely stay on a single job for a protracted period, Nationwide has faced a

KERR LEASING
& FLEET SERVICES CORP.



P.O. Box 27419
Denver, CO 80227
(303) 988-1198

. . . The leaders in customized vehicle leasing and fleet management for the cable industry.

FOR CORPORATE MOBILITY

FALS

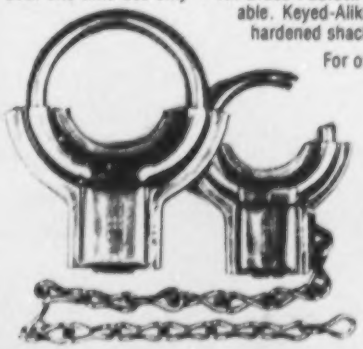
Furnishing vehicles equipped to your specifications — with aerial devices, boxes, bins, shelving, and generators.

LEASING FORD AND OTHER FINE CARS AND TRUCKS IN ALL 50 STATES.

The missing link
... to top security
Sterling Rotary Locks

Sterling locks' rotating shackle gives that extra margin of security. This unique design is a protection plus for utilities, municipalities and industrial firms.

• **Standard Padlock** for pad mounted transformers, CATV boxes and more. • **One-Shot Seal** one time use only • **All-Brass Padlock** superior weather resistance. Two sizes available. Keyed-Alike lock service. Options include 9" chain and hardened shackles.



For over half a century, Sterling Rotary Locks – the low cost link to security.

Write for our free brochure or call 612/872-4144.

ETU ENGINEERING UNLIMITED, Inc.

2841 Dupont Avenue South
Minneapolis, MN 55408

Construction

challenge from the International Brotherhood of Electrical Workers, DeNigris says. The union push didn't go far, however, before the IBEW withdrew from its organizing effort.

To minimize labor problems, DeNigris says he complies with franchise requirements, such as provisions for minority workers. "We always try to get a spread of minorities, even women from time to time," he says, adding that the women usually "don't end up lasting, but those that have, we've used them." DeNigris concedes, however, that because of the high degree of experience necessary to work cable construction—and because of the barriers faced by minority workers seeking to enter the trade—it is often difficult to find qualified minority help. "When we do, we've made a good effort to train them and use them" he says.

Just last week, Nationwide crews were putting the finishing touches on a sophisticated triple-trunk, 450 MHz new-build in Harrison, N.Y., where Adams-Russell holds the franchise. DeNigris put the value of the job, which passes some 7,000 homes, at about three-quarters of a million dollars. In the Harrison build, the firm and the MSO were faced with several tricky construction problems involving work on state-controlled thoroughfares, such as a major parkway and an interstate highway that traverses the area. Because Nationwide is not bonded to work on state property—and because DeNigris would rather not put up the sum required to allow such work—the MSO brought in another contractor that regularly handles road work.

But DeNigris strongly believes that turnkey and small contractors should strive to do as much as they can themselves, except when extenuating circumstances make it economically prohibitive. He strongly counsels against smaller contracts using subcontractors for elements of the job, since the turnkey risks losing quality control. His firm will use individuals who are incorporated as subscontractors, but steadfastly will not use companies with employees of their own.

Maintaining control also is a way of minimizing nuisance claims from homeowners who may make specious claims against cable constructors, DeNigris says. While his firm has had to go to its insurer to pay claims by homeowners, DeNigris maintains that some of the claims were without merit—but that the MSO general contractor required that his firm cover the claim through its insurance "to avoid a big political stink." As a result, he says, the insurance premiums paid by his and other smaller firms have increased, further cutting into operating margins. DeNigris estimates that his insurance costs have increased some 30 percent in the past year, and he partly blames residents who want to "eat off the cable industry" for driving up the cost of coverage.

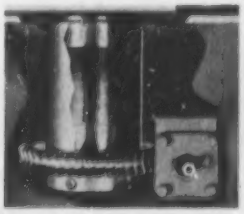
Although DeNigris sees more competition for fewer construction jobs in the future, Nationwide has a full two years of committed work on its calendar, much of it new-builds. After that, he says his firm will be "well in there" with rebuild activity. "We're big enough that we won't have any

IT'S WHAT YOU DON'T SEE THAT COUNTS!

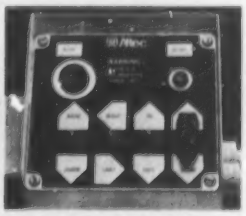
Most Aerial Lift Vans look about the same on the surface. However, after a few months of service, you'll see the difference! That's why you need a lift from America's number one, complete line Utility Equipment Manufacturer, Altec. A company with over 50 years in the industry—that's built a reputation for rugged, quality equipment . . . and fast, reliable service.

The AT100V and AT200V, with working heights of 30 and 34 feet, respectively, are built for long life and easy serviceability. And economical because they're rebuildable. An Altec Van has features, like those below, that make it more than just another pretty face. If you'd like to get more of the picture, contact Altec or an Altec Dealer for further details.

No Tangled Hose!
A chain-link-hose tracking system insures longer hose life. Keeps hoses and plumbing contained to resist wear and abrasion. Has bulkhead fittings for easier maintenance.



Rugged Rotation System!
Altec's Telescopic Aerial Device is built for demanding CATV work. The heavy-duty, hydraulically-driven rotation system features a 12-inch, bronze rotation gear! Fully adjustable for wear and rotates 380°.



Instant Stop Switch!
Works three ways—stops engine, dumps hydraulic fluid and shuts off power to controls. The controls are also designed to operate smoothly, making precise maneuvering easy for the operator.

Altec
The Quality is Perfectly Clear

ALTEC Industries, Inc.
Marketing
P.O. Box 10264
Birmingham, AL 35202

Phone 205-969-3400
Telex 78-2089 ALTEC BHM

Other Manufacturing and Servicing Facilities in
St. Joseph, MO, Indianapolis, IN, Atlanta, GA and
at Dealers' Locations.

problems," he predicts confidently, noting that his firm has 25 fully equipped trucks on hand, not counting underground equipment. "We're already looking at a 1984 200-mile rebuild, and we've done some already. I have to agree with what most contractors in the know will say: We're in a declining situation when it comes to new-builds, but the rebuild and upgrade activity is going to increase."

However, the smaller competitors face a squeeze and should begin to formulate strategies on how to handle it. "Some of the small guys may dry up," DeNigris says bluntly. "We're getting calls from companies selling equipment. They don't want to admit it, but they're getting squeezed. It's still a who-you-know business; if you know certain people in the areas you concentrate your work in, you'll stay alive."

Kennedy staying competitive

Kennedy Cable Construction President Roger Kennedy means it literally when he says he "started from the ground and worked his way up" in the cable construction business. Before forming his own company in 1972, Kennedy was digging ditches and laying cable.

Now, Kennedy claims his Georgia-based company "is one of the largest underground cable contractors in the business." It employs more than 1,000 construction workers, has $2.7 million invested in equipment, and last year grossed over $10 million in sales, servicing about a dozen different cable companies. But in the last six months, Kennedy said the company's sales have been down by half—an indication, he believes of the tight, highly competitive situation the cable construction industry finds itself in. He blames it primarily on an influx of new, inexperienced cable construction contractors into the business and the slowing of many major MSO builds in big cities.

"We anticipated a lot (of business) this year, but the industry is off. We don't know when it will improve. All indications look like early 1984," Kennedy said.

The "flood of cable contractors" into the business happened within the last year and a half, according to Kennedy, about the time when major MSOs began to cut back on construction.

"A lot of these contractors worked as subcontractors. When the work-load dropped off, these guys were out on the street looking for work and bidding against us," Kennedy said.

Kennedy maintains that some of these companies are not qualified since they have no track record. They bid low and force major contractors to compete with their pricing. In many instances, the work is underpriced and inferior, Kennedy believes.

Milt Deever, President - Comtech Data Corp.

"We've shipped more high speed broadband modems than all of our competition combined."

Although a number of suppliers have 'announced' similar products, Comtech Data remains the leading supplier to the high speed broadband modem market.

That's because we pioneered the development of high speed data communications on broadband. As pioneers, we have marked the trail our competitors must follow. Since 1979 we have been refining the technology used for data transmission on cable. In fact, over the past four years Comtech has shipped broadband modems for use in cable systems and local area networks around the world.

APPLICATIONS

Our 500 Series broadband modems are currently operating world wide in a variety of applications such as:

Remote earth station data links
Computer to computer links
Interconnection of PBX systems
Remote graphics (CAD/CAM)
Point to point or multi-drop networks
Remote terminals and printers, and
Process automation, robotics, telemetry

The Comtech Series 500 broadband modems are designed to be compatible with existing CATV systems. Connecting a 500 Series modem to your system will allow you to transmit data bi-directionally at rates of 56 KBPS to 10 MBPS, with aggregate rates up to 500 MBPS, using available bandwidths currently unoccupied.

The built-in test capability allows for quick fault isolation. The modular design makes upgrading and repair easy.

With an M500 Series modem you will be on-line quickly and generating revenue from your existing plant, using technology that is available today.

Comtech is committed to the developing technology of broadband data transmission and we will continue to enhance and broaden this product line. Our engineering excellence is providing effective solutions for transmitting high speed digital data on broadband systems. For more information call or write Comtech Data Corporation's Digital Product Sales Department, 350 North Hayden Road, Scottsdale, AZ 85257, (602) 949-1155 or TWX 910-950-0085.

COMTECH Data Corporation

A Subsidiary of Comtech Telecommunications Corp.

Creative Solutions in Data Communications.

Construction

Like other cable contractors, the bulk of Kennedy's business is in construction labor and not true turnkey cable in Georgia, South Carolina and Florida, primarily for independent operators. Kennedy said that in an effort to keep the company's turnkey operation in full swing, he has tailored the turnkeys to "Mom and Pop system owners who need expertise in engineering and construction." Turnkey construction makes up to 20 to 30 percent of Kennedy's business. None of the turnkey business has been for larger MSOs, but the company has done construction work for Warner Amex, Storer, TeleCable, Vision Cable and Cable Atlanta, mostly in the Sunbelt area.

Kennedy recently finished a job with a Storer system in Charleston, S.C., a project the company has been working on since 1977. Kennedy construction crews laid about 1,000 miles of cable for the system. Storer cut back on construction this year, according to Kennedy, which stopped work in Charleston. "All they are doing now is their major commitments. That really affected us," he said.

For a job such as Charleston, Kennedy invested some $50,000 in underground equipment and tools, and $20,000 for the aerial crew, trucks and equipment. Its charges vary as much as 20 percent depending on a project's location, the area's terrain and the cost of living. Underground labor costs range from $1 to $10 per foot, and for aerial, 40 to 70 cents a foot.

Kennedy believes many MSOs are taking cues from Storer and Warner Amex, two companies that have both slowed construction because of tight financial situations.

"They've (Storer and Warner Amex) got all the other MSOs looking at them because they've lost money. They (the other MSOs) are saying 'We better look at what we're doing, maybe we better slow down and concentrate on getting new subscribers and forget about doing a rebuild project or a new-build program.' The problems with Storer and Warner Amex have definitely affected the MSOs on their building rights," Kennedy said.

Despite the tough competition, Kennedy believes the less qualified contractors will be weeded out. His company recently was awarded a contract in Tampa were they bid against 100 other applicants. But he said that the company has had to cut its prices "tremendously" to get work.

Wright & Lopez's move

Wright & Lopez tinkered with cable for 10 or 12 years before getting into it seriously in June 1981, according to Eugene Casale, marketing manager for the company's cable television division in Jupiter, Fla. After spending 45 years in the telephone construction business, the company had the necessary equipment and had reached "maximum" saturation in the telephone business, he said.

"It was logical. Wright & Lopez was licensed in over 14 states to do telephone

Barker CATV Construction, Inc.
128 NW Ellison
Burleson, Texas 76028
(817) 295-0454

From a modest beginning in Texas, Barker CATV Construction Inc. has expanded rapidly. We are currently working in several states with business offices in Burleson, Texas, Doraville, Georgia and Newhall, California.

Since our beginning in 1979 we have successfully completed construction projects for several major MSO's.

Barker CATV Construction maintains a permanent staff of experts in cable construction and engineering. The key to quality starts with people. Barker has assembled a team of skilled employees who work together productively in our organization.

Barker CATV Construction has both people and equipment available to offer a full line of services including:

Engineering
Strand mapping, pre-franchise ascertainment surveys, new build, rebuilds, system extensions, as-builts

Drafting
Base maps, strand maps, electronics drafted to customer specifications

Design
Sub-split, mid-split, designed to meet customer specifications. Attention paid to lost effectiveness and reliability.

Consulting
System evaluations (construction quality and operational performance). Set up maintenance programs and cost analysis.

Construction
New build, experienced in single, dual institutional and hub-interconnects.

Regional offices:
Barker CATV Construction, Inc.
6555 Button Guinett Road
Doraville, GA 30340
(404) 448-2019

Barker CATV Construction, Inc.
22924 Lyons Avenue, Suite #204
Newhall, CA 91321
(805) 254-0030

work, and we were doing bits and pieces of cable at the request of local groups."

The company does a number of cable builds for small communities under the Rural Electrification Act. Those REA jobs are total turnkey operations, with Wright & Lopez buying all the equipment including poles, cable and amplifiers.

For systems that are privately financed, W&L generally provides the labor to build the system, and the franchisee furnishes all the supplies. Half of the company's jobs are private franchises.

The only work that is subcontracted out is usually road restoration. Everything else is done in house, according to Tom Scott, general manager of the CATV division.

Wright & Lopez is just finishing up building new plant for Colony Communications' system in Coral Gables and Hialeah, Fla. In addition, the company is building a 90-mile system in Reynolds, Ga., for Peoples Telephone Service and a 300-mile system for Atlantic Telephone in Shallotte, N.C. In Atlanta, W&L is wiring multi-dwelling units on a bid basis for Cable Atlanta.

Although the recession has affected the cable TV industry, Scott believes the economy is making a slow turnaround and his business is picking up. "Business was worse probably six or eight months ago when the economic slowdown finally caught up with the industry," he said.

"But it didn't last long. People just ran short of money. The large cable companies were having to look at their budgets and see what kind of money they had to bid on and build franchises with," he said.

Wright & Lopez employs 300 in its CATV division. The company has 22 cable trailers, 83 pickup trucks, 670 heavy trucks, 124 boring rigs, 219 backhoes and 307 trenchers.

Last year, the CATV division had operating expenses of $2.5 million for materials and $3 million for labor and overhead on gross revenues of $10 million.

Everything the division has done thus far has been new-builds, but the company has bid on some rebuilds, including one in Raleigh, N.C. Scott says his company plans to bid on the contracts for the outer boroughs of New York City as well.

Scott complained that the cost of equipment and supplies has nearly tripled in the past decade. However, he said the increases in the prices of equipment had slowed down in the last year.

"People are willing to negotiate a price on a piece of equipment, rather than when the business was great and equipment was hard to get—and suppliers got their prices," he said.

View from SCTE

As president of the Society of Cable Television Engineers and executive vice president of a major cable construction company, Communications Construction Group, of Westchester, Pa., Tom Polis is in a unique position to view the current trends in the industry with regard to building, hardware sales and technological developments. In an interview, Polis' comments seemed to accurately sum up the current situation in the field.

Construction and hardware sales have slowed over the past few months, Polis noted, but that is no cause for great alarm. Polis foresees more rebuilds and upgrades coming into being. Along with this is a growing interest among operators in new technological advances to revamp their current plant. And, in another trend that speaks well for the industry, Polis believes the quality of most products have improved while prices have generally remained competitive.

In reviewing the year's activity so far, Polis said, "There has been generally less construction during 1983 than originally forecast. Plant is growing at a lower rate than it has in the past. There are a lot of reasons for this, but I think it's mainly due to the fact that there's been so much capital already thrown out and so many questions concerning the viability of the major markets."

Polis sees some hesitancy in small markets as well as major urban areas. "There were some systems in 1982 that were 'for sure' going to be built in '83 and they're now 'for sure' going to be built in the first quarter of '84."

While the new-build situation has slowed, there is an increased emphasis on rebuilds. "I tend to see much more activity right how in the way of rebuilds, where they are physically removing old plant and building new state-of-the-art plant," Polis said.

"Also there has been a surge in recent months of retrofit ungrades, where cable is remaining in place and the electronic capacity is upgraded from, say, 220 MHz to 300 or 330 utilizing new technologies such as feedforward or power doubling."

Being on the construction side of cable, Polis views the product lines of the wide number of distributors. He said, "I think the biggest change has been in the area of reliability, particularly with line equipment. In terms of the amplifier, passives, etc., we're finding much more consistency in products delivered to the field and a to less infantile failures. Quality in general has improved. New innovations are coming out which, of course, have their inherent initial problems. But the basic products themselves have improved considerably."

The increase in quality has not meant large increase in prices. "I think the pricing is far more competitive than it was a year ago," Polis said.

In addition, Polis feels that today's manufacturers of cable equipment are better meeting the needs of the operator. "The driving force has always been the manufacturers in meeting the operators' needs. I think we're starting to see a turn here where the operator is telling the manufacturer what he needs."

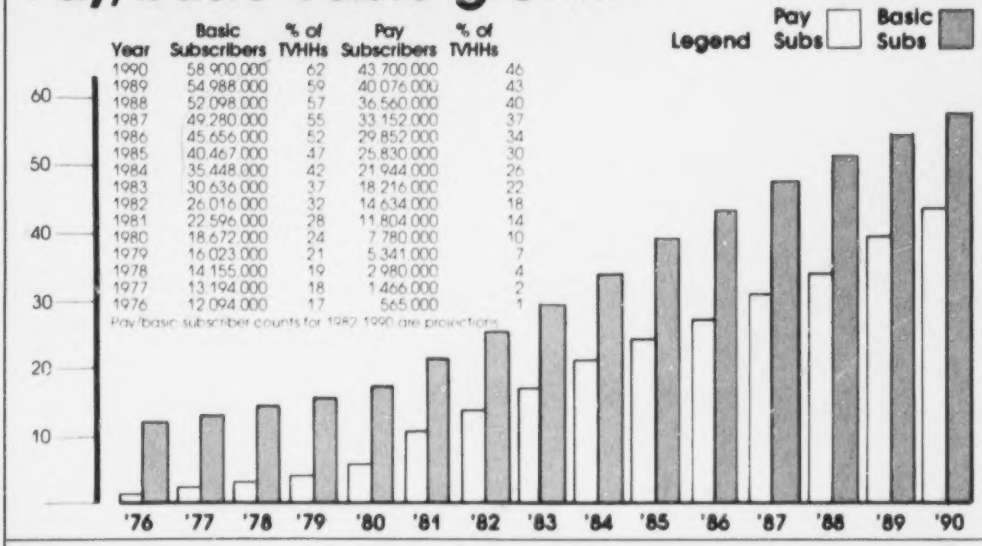
—Craig Leddy

Pay/basic cable growth

Source: ICR, Cable Information Service—a Titsch Communications division.

Year	Basic Subscribers	% of TVHHs	Pay Subscribers	% of TVHHs
1990	58,900,000	62	43,700,000	46
1989	54,988,000	59	40,076,000	43
1988	52,098,000	57	36,560,000	40
1987	49,280,000	55	33,152,000	37
1986	45,656,000	52	29,852,000	34
1985	40,467,000	47	25,830,000	30
1984	35,448,000	42	21,944,000	26
1983	30,636,000	37	18,216,000	22
1982	26,016,000	32	14,634,000	18
1981	22,596,000	28	11,804,000	14
1980	18,672,000	24	7,780,000	10
1979	16,023,000	21	5,341,000	7
1978	14,155,000	19	2,980,000	4
1977	13,194,000	18	1,466,000	2
1976	12,094,000	17	565,000	1

Pay/basic subscriber counts for 1982-1990 are projections.



Cable barometer

Television households (TVHH) 83,900,000
Homes passed by cable (HP) . 51,019,700
Percent of TVHH passed by cable 60.8%
Basic cable subscribers . 28,933,300
Percent of TVHH with basic cable 35.7%
Percent of HP with basic cable 56.7%
Pay cable subs 16,800,000
Percent of TVHH with pay cable 20.2%
Percent of HP with pay cable 32.9%
Percent of basic subs with pay cable .. 58.1%

Figures are as of May 31, 1983

Subscription television systems

ON TV
1225 Grand Central Ave.
Glendale, Calif. 91201
(213) 507-5600
Parent: Oak Communications
Channel 52
Turn on date: 4/1/77
Basic subs: 270,824 (6/1/83)
Basic rate/month: $22.63

SelecTV of California
4755 Alla Rd.
Marina del Ray, Calif. 90291
(213) 827-4400
Parent: Harris Broadcasting
Channel 22
Turn on date: 7/1/78
Basic subs: 118,000 (7/1/83)'
Basic rate/month: $25.09

Subscription TV-San Francisco
1176 Cherry Ave.
San Bruno, Calif. 94066
(415) 875-1277
Parent: SelecTV-San Bruno
Channel 26
Turn on date: 8/1/80
Basic subs: 14,000 (7/1/83)
Basic rate/month: $22.95

Subscription Television of Greater Washington/Baltimore (Super TV)
8200 Greensboro Dr., Suite 400
McLean, Va. 22102
(703) 556-9250
Parent: Field Communications, Subscription Television of America
Channel 50 (Washington); Channel 54 (Baltimore)
Turn on date: 11/1/81 (Washington); 7/1/82 (Baltimore)
Basic subs: 82,972 (7/1/83)
Basic rate/month: $19.95

ON-TV South Florida
4035 N. 29th Ave.
Hollywood, Fla. 33020
(305) 923-6699
Parent: Oak Media Corp.
Channel 51
Turn on date: 1/1/80
Basic subs: 36,000 (7/1/83)
Basic rate/month: $19.95

Sports Vision
875 N. Michigan, Suite 1540
Chicago, Ill. 60611
(312) 787-2600
Parent: Four Chicago sports teams
Channel 60
Turn on date: 5/1/82
Basic subs: 25,000 (7/1/83)
Basic rate/month: $21.95

ON TV of Chicago
500 E. Business Center Dr.
Mount Prospect, Ill. 60056
(312) 635-7050
Parent: Oak Communications/Harris Broadcasting/Essenes Theaters
Channel 44
Turn on date: 9/1/80
Basic subs: 96,846 (6/1/83)
Basic rate/month: $22.95

SPECTRUM
501 W. Algonquin Rd.
Arlington Heights, Ill. 60005
(312) 952-1122
Parent: United Cable Television Corp.
Channel 66
Turn on date: 9/1/81
Basic subs: 41,168 (7/1/83)
Basic rate/month: $22.95

Preview
51 Morgan Dr.
Norwood, Mass. 02062
(617) 769-7850
Parent: American Television and Communications Corp.
Channel 27
Turn on date: 9/1/80
Basic subs: 45,000 (7/1/83)
Basic rate/month: $22.95

IT Subscription Television
3951 Varsity Dr.
Ann Arbor, Mich. 48104
(313) 973-7900
Parent: Satellite Syndicated Systems Inc.
Channel 31
Turn on date: 2/1/81
Basic subs: 15,500 (7/1/83)
Basic rate/month: $19.95

SelecTV
615 Anne St. N.W.
Bemidji, Minn. 56601
(218) 751-0526
1404 W. 4th St.
Grand Rapids, Minn. 55744

(218) 326-5932
Parent: Community Broadcast Inc.
Channel 18 (Grand Rapids); Channel 26 (Bemidji)
Turn on date: 12/1/82 (Grand Rapids); 4/1/81 (Bemidji)
Basic subs: 1,500 (7/1/83)
Basic rate/month: $15.85

Spectrum
6220 N.E. Taft St.
Minneapolis, Minn. 55413
(612) 623-0200
Parent: Home Entertainment Network
Channel 23
Turn on date: 9/1/82
Basic subs: 21,811 (7/1/83)
Basic rate/month: $19.95

WHT (Wometco Home Theater)
390 W. Market St.
Newark, N.J. 07107
(201) 643-6800
3200 Expressway Dr. S.
Central Islip, N.Y. 11722
(516) 582-6700
Parent: Wometco Enterprises Inc.
Channel 67 (Smithtown); Channel 68 (Newark)
Turn on date: 1/1/80 (Smithtown); 7/1/77 (Newark)
Basic subs: 105,500 (6/1/83)
Basic rate/month: $22.95

WHT (Wometco Home Theater)
286 Eldridge Rd.
Vineland, N.J. 08360
(201) 227-8700
Parent: Wometco Enterprises Inc.
Channel 65
Turn on date: 7/1/81
Basic subs: 11,000 (6/1/83)
Basic rate/month: $21.00

ON TV
5179 Fishwick
Cincinnati, Ohio 45216
(513) 641-4400
Parent: Home Entertainment Network, a subsidiary of United Cable Television Corp.
Channel 64 (Cincinnati); Channel 66 (Dayton)
Turn on date: 12/1/82
Basic subs: 18,739 (7/1/83)
Basic rate/month: $20.95

IT Subscription Television (Tulsa STV)
5455 S. 99 East Ave.
Tulsa, Okla. 74145
(918) 622-3891
Parent: Satellite Syndicated Systems Inc.
Channel 41
Turn on date: 3/1/81
Basic subs: 7,800 (7/1/83)
Basic rate/month: $22.95

Willamette Subscription TV
9320 S.W. Barbur Blvd.
P.O. Box 19817
Portland, Ore. 91219
(503) 293-6666
Parent: Willamette Subscription TV
Channel 22 (Salem)
Turn on date: 1/1/82
Basic subs: 15,000 (6/1/83)
Basic rate/month: $19.95

PA Pay TV
300 Domino Lane
Philadelphia, Pa. 19128
(215) 483-4550
Parent: Channel 57 Inc.
Channel 57
Turn on date: 6/1/81
Basic subs: 11,000 (7/1/83)
Basic rate/month: $21.95

STV Reading Inc. (The Movie Store)
1729 N. 11th St.
Reading, Pa. 19604
(215) 921-9181
Parent: STV Reading Inc.
Channel 51
Turn on date: 1/1/83
Basic subs: 2,000 (7/1/83)
Basic rate/month: $19.95

Veu Inc.
901 W. North Carrier Pky.
Grand Prairie, Texas 75050
(214) 988-3005
Parent: Independent American Television
Channel 27 (Dallas)
Turn on date: 11/1/80
Basic subs: 54,200 (7/1/83)
Basic rate/month: $17.95

SelecTV
4085 N. 128th St.
Brookfield, Wis. 53005
(414) 783-4940
Parent: SelecTV
Channel 24 (Milwaukee)
Turn on date: 6/1/80
Basic subs: 118,000 (7/1/83)[1]
Basic rate/month: $23.57

[1] Subscriber count is combined for Marina del Ray and Milwaukee.
Source: ICR, Cable Information Service—a Titsch Communications division.

Top 20 MSOs

Rank	Multiple system operator	Basic subs
1.	Tele-Communications Inc.[1]	2,288,000
2.	American Television and Communications Corp.	2,248,525
3.	Group W Cable	1,812,000 (7/83)
4.	Cox Cable Communications Inc.	1,376,788
5.	Warner Amex Cable Communications Inc.	1,300,000 (4/83)
6.	Storer Cable Communications	1,279,000
7.	Times Mirror Cable Television Inc.	844,600
8.	Rogers UA Cablesystems	763,668 (5/83)
9.	Newhouse Broadcasting[2]	751,625
10.	Continental Cablevision	664,000 (4/83)
11.	Viacom Cablevision	661,982
12.	United Cable Television Corp.	596,076 (5/83)
13.	Sammons Communications Inc.	554,488 (7/83)
14.	TeleCable Corp.	360,091
15.	Heritage Communications	342,377
16.	Cablevision Systems Development	316,000 (5/83)
17.	Capital Cities Cable Inc.	314,283 (11/82)
18.	General Electric Cablevision	314,000
19.	Comcast Cable Communications	304,000
20.	Liberty Communications	262,232

Subscriber counts are as of 6/83 unless noted otherwise.
[1]Number is an estimate.
[2]Includes MetroVision, NewChannels, Vision Cable.
Source: ICR, Cable Information Service—a Titsch Communications division.

Top 20 systems

Rank	Location	Operator	Basic subs	
1.	San Diego, Calif.	Cox Cable	225,000	
2.	Woodbury (Long Island), N.Y.	Cablevision Systems	192,000	(4/83)
3.	Houston, Texas	Warner Amex	182,600	
4.	Manhattan, N.Y.	ATC	174,415	(3/83)
5.	San Antonio, Texas	Rogers UA	164,745	(5/83)
6.	West Orange, N.J.	Maclean Hunter	149,991	(5/83)
7.	Wayne, N.J.	Rogers UA	120,394	(5/83)
8.	Tulsa, Okla.	United Cable	106,834	(5/83)
9.	Audubon, N.J.	NYT Cable	105,332	
10.	Erie County, N.Y.	Prime Cable	100,287	
11.	Rochester, N.Y.[1]	ATC	100,000	
12.	San Jose, Calif.	Gill Industries	97,850	
13.	Austin, Texas	ATC	97,425	(3/83)
14.	Cincinnati, Ohio	Warner Amex	95,000	(4/83)
15.	Tidewater, Va.	Cox Cable	91,393	(12/82)
16.	Baltimore County, Md.	Cattec Cable	92,377	(7/83)
17.	Seattle, Wash.	Group W Cable	87,618	
18.	Central Islip (L.I.), N.Y.	Viacom	87,121	
19.	Orlando, Fla.[1]	ATC	86,700	(3/83)
20.	Memphis, Tenn.	ATC	85,025	(3/83)

Subscriber counts are as of 6/83 unless noted otherwise.
[1] Figures are estimates.
Source: ICR, Cable Information Service—a Titsch Communications division.